



## **Department of Energy**

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May 28, 2003

Mr. Dean J. Nygard, Remediation Program Manager  
Waste Management and Remediation Division  
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Mr. Wayne Pierre  
U.S. Environmental Protection Agency  
Environmental Cleanup Office (M/S ECL-113)  
1200 6<sup>th</sup> Avenue Suite 900  
Seattle, Washington 98101-3188

**SUBJECT:** INEEL – Disagreement Over Scope of the Draft “Long-Term Ecological Monitoring Plan for 2003 (INEEL/EXT-02-01191, Revision D, January 2003)”  
(EM-ER-03-127)

**REFERENCE:** Letter, D. Nygard and W. Pierre to K. Hain, “Long-Term Ecological Monitoring Plan for Operable Unit 10-04 Record of Decision (ROD),” dated April 14, 2003

Dear Mr. Nygard and Mr. Pierre:

The reference letter:

- (1) Was sent in “... hope that DOE will reprioritize a substantial portion of the allocated resources for this monitoring effort to more critical FFA/CO needs.”
- (2) Stated that:
  - (A) The Long-Term Ecological Monitoring (LTEM) Plan called for “... extensive annual sampling and analysis ...” and that such sampling and analysis was being implemented prematurely.
  - (B) The first step in implementing an LTEM should be developing “A schedule for site walk-downs and visual inspections in the WAG site areas ... to ensure that assumptions in the risk assessment are still applicable.”
  - (C) “A second priority in any monitoring is what are the ecologically significant COCs that will result in observable ecological harm.”
  - (D) “A third consideration should be whether these contaminant levels can be monitored via field portable instrumentation.”

Regarding (1) above, the Department does not separately request or allocate funds to either Environmental Restoration or Federal Facility Agreement and Consent Order (FFA/CO) compliance. A reduction in the scope or funding of the Long-Term Ecological Monitoring Plan will not necessarily result in an increase in funding to another FFA/CO task. Any funds made available through operating efficiencies or scope changes are used to fund either unfunded or underfunded Environmental Management projects based upon overall INEEL cleanup priorities.

While reductions in FY-03 funding have impacted the entire Environmental Management Program, the Department has ensured that all scope required to meet Fiscal Year 2003 FFA/CO milestones has been adequately funded.

Regarding (2)(A) above:

- (1) The Department committed in several INEEL RODs and in the "OU 10-04 Statement of Work" to develop an ecological baseline to support the long-term assessment of FFA/CO action adequacy. The determination of ecological impact was specifically reserved for the OU 10-04 ROD. Delay in the phased development of the baseline will increase the life-cycle cost of ROD implementation.
- (2) The OU 10-04 ROD states "monitoring will ensure that expectations regarding the protectiveness of the 'no action with Sitewide Ecological Monitoring' decision are met." The ROD supports the development of a comprehensive surveillance and monitoring plan. The mandate is clear for a sound ecological monitoring and surveillance strategy to be developed for the 890 square miles that comprise the INEEL.
- (3) Recent Natural Resources Damage suits brought against other Department sites have indicated that the development of an adequate environmental baseline is a necessary prerequisite to the completion of clean-up. Adequate and systematic data collection for an environmental baseline is required to satisfy stakeholder concerns and to support the reduction and streamlining of future long-term monitoring. Stakeholder comments on the OU 10-04 Proposed Plan reinforced the Department's position that an adequate environmental baseline is necessary. Furthermore, our comparisons with the LTEM programs at other DOE sites, one of which is within EPA Region 10's purview, appear to indicate that the proposed INEEL program is absent a number of features that we believe our stakeholders would expect in a comprehensive LTEM plan. DOE-ID will hold a formal meeting of the INEEL Natural Resources Trustees this summer.
- (4) Recognizing that cost is a concern, the LTEM Plan was designed to be as cost-effective as possible while still addressing the objectives of the project. The estimated cost may seem high if only one contaminated site were being considered. However, the LTEM Plan is proposing to address over 256 sites at 10 WAGs that are situated on 890 square miles of ecologically important area. In this larger view, more effort may be required to ensure protection of natural resources.
- (5) The LTEM Plan has identified 15 areas of concern (including the eight facilities). We propose to collect three representative species from 10 locations (plots) from three to four of these areas per year over a five-year period. DOE does not view evaluating three sentinel species, of the more than 200 species of plants and animals at the INEEL, to be excessive scope. The project is designed to provide a baseline of current contamination and attempt to detect whether effects are occurring at these areas of concern. The establishment of a baseline and the results of the effects evaluation will allow the development of a more focused monitoring and surveillance program. DOE does not believe that the project scope represents an extensive sampling and analysis effort given the number of sites and contaminants that have been identified over this large area.

Regarding (2)(B) above,

- (1) The OU 10-04 ROD directs that the following activities, among others, be performed:
  - (A) Develop a comprehensive surveillance and monitoring plan.
  - (B) Conduct walk-downs and visual inspections in the WAG areas.
  - (C) Perform yearly sampling and analysis of site-specific flora and fauna for ecological contamination based upon location or area-specific field sampling plans.
  - (D) Provide an annual status report.
  - (E) Perform selected research studies, such as measuring effects upon INEEL populations or individual species, to support the development and understanding of long-term trends in the INEEL's ecology.
- (2) The purpose of walk-downs is to record general information of biological interest, including the species observed, number of individuals, and habitat quality. Walk-downs are considered to be a valuable part of a comprehensive monitoring and surveillance project. However, being extremely qualitative, they do not provide the basic information necessary for monitoring contaminant and effect trends in the environment.

Regarding (2)(C) above, the OU 10-04 Environmental Risk Assessment (ERA) effort was used to identify areas of concern and COPCs for LTEM sampling. The LTEM sampling plan is designed to ensure the protectiveness of:

- (1) The remediation at remediated sites.
- (2) "No Action" for those sites with contamination at a level of concern to ecological receptors. Therefore, the LTEM Plan concentrates on areas with known contamination concentrations that are estimated to pose an unacceptable ecological risk. The sampling is designed to ensure that no irreversible harm at these sites occurs.

Regarding (2)(D) above, some contaminants (such as gamma-emitting radionuclides) are relatively easy to detect using portable instrumentation. The LTEM project is planning to evaluate the use of an *in situ* gamma-ray field spectrometer as part of its summer activities. This portable system uses germanium detectors to measure gamma-emitting contaminant concentrations in soil samples. In the future, consideration will be given to evaluating whether other contaminants can be monitored reliably via field portable instrumentation. However, as shown in the OU 10-04 ERA, metals and organics are frequently drivers of risk for ecological receptors. Field screening techniques may be available and will be used as possible.

It is important to remember that, with the exception of WAG 5, all of the WAGs deferred their responsibility for ecological risk assessment of their sites to the OU 10-04 ERA. The ERA used broad acceptance criteria (i. e., loss of 20% of the communities) and the sampling efforts for ecological risk were extremely limited. The "Comprehensive INEEL-Wide Ecological Risk Assessment" discussed in the ROD was based on three sample locations with five plots per location. It is because of the narrow foundation of this assessment that the OU 10-04 ROD states on page viii that the "The monitoring will ensure that expectations regarding the

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protectiveness of the no action approach to the INEEL-wide ERA are met." Uncertainty issues relevant to the INEEL-wide ERA are presented in Section 17 and Appendix F of the "OU 10-04 Comprehensive RI/FS."

As you know, the LTEM Plan is not an FFA/CO document at this time. The Draft "RD/RA Work Plan for Institutional Controls And Ecological Monitoring" will include the document. If you believe that the LTEM Plan's scope is excessive, we should resume the discussion after the RD/RA Work Plan is submitted. The Department believes that we are complying with the OU 10-04 ROD. If either of you believes that the ROD does not reflect your Agency's current position on ecological monitoring, please provide a white paper that outlines how the ROD should be changed or clarified.

If you have any questions concerning this submittal, please call either Glenn Nelson at (208) 526-0077 or me at (208) 526-4392.

Sincerely,



Kathleen Hain, Lead  
Environmental Restoration Program

cc: R. Poeton, EPA, Region 10, (M/S ECL-113)  
G. Winter, IDEQ-Boise, Technical Services, Geosciences